



State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES
6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095
(603) 271-3503 FAX (603) 271-2867



Reissued March 16, 2000

Dear Sir/Madam:

The New Hampshire Department of Environmental Services (NHDES) provides regulatory oversight of petroleum contaminated sites, to insure that the cleanup is cost effective and timely. A commonly used remediation method at these sites is soil excavation and disposal. NHDES has seen a wide variation in the detail and completeness of plans and specifications submitted for review for soil excavation and disposal projects. To provide consistency in the specifications used for procurement of Contractors and execution of soil excavation and disposal projects, NHDES has prepared the attached soil excavation and disposal specifications.

This document should be used as the base specification for your soil excavation and disposal project. However, using this document does not absolve you of the responsibility of evaluating the specific requirements of your project. This document may include requirements that are not appropriate for your project site. Other requirements that are appropriate may be missing.

The attached Specifications must be thoroughly reviewed relative to their applicability for your project. This document is in no way considered complete for any given project, but is to be used as a template for your final project specifications. You must make whatever modifications, additions or deletions to the document that are necessary to ensure that the project will be executed using means, methods and precautions that are consistent with the current state of practice, and will provide acceptable post-construction performance of the facility.

As a portion of your engineering evaluations, you must determine which requirements of the attached specifications need to be modified, added or deleted. The following must be included in your evaluations:

1. The required type and thickness of fill and pavement materials must be determined so that adequate performance of the paved areas under the expected traffic loading is ensured. You must make any modifications to the material types, thicknesses, placement and compaction requirements, subgrade preparation requirements, etc. that are included in the Specifications to ensure acceptable post-construction performance of the facility.
2. Requirements must be developed for protection of specific structures, utilities, etc., including evaluation whether a designed lateral excavation support/shoring system is necessary. If a lateral support system is not

necessary, the related sections of the attached Specifications should be deleted.

The actual design of any lateral excavation support/shoring system should be the responsibility of the contractor, who must submit a design prepared by a registered Professional Engineer, as indicated in the Specifications.

Performance requirements for lateral support/shoring systems, such as allowable movements of system components, adjacent structures or ground surface must be established and included in the Specifications.

3. If open pumping of accumulated water from the bottom of excavations is not appropriate or prudent, special requirements for dewatering the excavations must be included in the Specifications. If lowering groundwater levels prior to excavation is necessary, dewatering system performance requirements must also be included in the Specifications.
4. If on-site treatment and disposal of contaminated groundwater is an available or preferred alternative to off-site disposal, treatment system performance requirements and submittal requirements for the system must be developed and provided. Responsibility for the treatment system design, operation and maintenance, obtaining permits, sampling and testing of treated and un-treated water, etc. must also be established in the Specifications.
5. Plans of the proposed excavation areas must be developed and included with the Specifications. The Plans should include details and cross-sections depicting the soil and groundwater conditions and existing structures, utilities and other features which may be impacted by the work.
6. The list of possible permits applicable to the project that is included in Section 14.00 must be reviewed and modified to be project-specific.
7. The blanks at the beginning of the specifications document must be filled in to reflect specifics of the project, the estimated depth of excavation (Section 7.01) and the required completion time of the Contract (Section 18.00). The Owner's name and project location at the beginning of the Bid Form must also be completed.
8. Estimated quantities must be added to the Bid Form.
9. The following attachments must also be completed: Attachment A, detailing subsurface information and reports that will be made available for contractor review during the bid period; Attachment B, detailing services to be provided by the Owner, and any special restrictions that the Owner is placing on the prosecution of the Work, such as scheduling, maintenance of traffic, temporary access considerations, etc.; and Attachment C, detailing any restrictions that are imposed on the Contractor relative to site conditions, access, hours and days of work, etc.

After you have completed your review and modifications to these Specifications, the project-specific Plans and Specifications must be submitted for review and approval by NHDES prior to the solicitation of bids from contractors. The purpose of our review is: 1) to limit the risk of increased project costs that may result from contradictions, or information missing from the Specifications, and 2) to insure that item descriptions in the bid form are presented in a manner that will allow cross checking with reimbursement requests, and review of relevant unit costs.

Following our review and approval of the Plans and Specifications, and prior to solicitation of bids for the work, the documents must be stamped and signed by a qualified Professional Engineer, licensed in the State of New Hampshire. By doing so, you are certifying that the work required in the Plans and Specifications has been thoroughly reviewed and confirmed to be complete, and that you have made whatever modifications to the Specifications that are necessary to provide appropriate levels of protection or post construction performance.

Note that the attached document does not include contract terms and conditions (regarding indemnification, warranty, severability, termination, delays, payment terms, etc). NHDES assumes that this language will be included in a terms and conditions section that will establish a contractual relationship between you (or the Owner) and the Contractor. NHDES will not review the terms and conditions of your contractual agreement with the Contractor.

The required Bid Bond is included as protection against a potential low bidder withdrawing his bid from consideration, thereby necessitating re-bidding the project. The Bid Bond would be used as compensation for the additional costs that would be incurred during the re-bidding process. The Performance Bond is required to ensure that the project is completed. In the event that a Contractor does not complete the Project, the Performance Bond funds would be used to complete the work without incurring additional costs. **NHDES will require a Performance Bond for soil excavation and disposal projects where the cost is estimated to exceed \$100,000, or where the nature of the work and site conditions warrant a performance bond in the opinion of NHDES and/or the consultant.**

If you have any question or suggestions, please contact Robin Mongeon at 271-7378 or Fred McGarry at 271-4978 or at the Waste Management Division address on the letterhead.

SOIL EXCAVATION AND DISPOSAL SPECIFICATIONS

Project Name:		Engineer:	
Project Location:		Owner:	
DES File No:		Specification Date:	

1.00 SCOPE OF WORK

The Work of this contract consists of obtaining any and all permits required to complete the work of this project, including but not limited to: soil excavation; dewatering system design, installation and operation; protection of existing on- and off-site utilities and other facilities; segregation of clean and contaminated soil; providing, installing and maintaining impervious covers for soil stockpiles; disposal of contaminated soils; backfilling, re-paving or other restoration of surfaces; and other tasks detailed in these specifications necessary to complete the Work. The Contractor shall furnish all labor, equipment, materials, transportation and tools required to complete the Work.

2.00 ABBREVIATIONS AND DEFINITIONS

NHDOT Specifications	New Hampshire Department of Transportation Standard Specifications for Road and Bridge Construction, 1997 ed.
EPA	United States Environmental Protection Agency
NHDES	New Hampshire Department of Environmental Services
ASTM	American Society for Testing and Materials
PID	Photoionization detector
VOCs	Volatile organic compounds
TPH	Total Petroleum Hydrocarbons

3.00 BONDS

Each Bid must be accompanied by a Bid deposit in the form of a Bid Bond, or a certified check issued by a national bank or trust company located in the State of New Hampshire and payable to the order of the Owner. The amount of deposit for this Contract shall be ten (10) percent of Bid Price. The deposit shall be enclosed in the sealed envelope containing the Bid.

Each Bid deposit may be held by the Owner as security for fulfillment of the Bidder's promises, set forth in his Bid, that he will not withdraw his Bid while it is being considered and will execute the Contract and furnish the required Bonds and insurance certificates if his Bid is accepted. Should the Bidder fail to fulfill such promises, his Bid deposit shall become the property of or be payable to the Owner as payment for damages. The Bid security of the successful Bidder will be retained until he has executed the Contract and furnished the required Performance Bond and insurances, whereupon the Bid security will be returned.

Unless they shall become the property of, or be payable to the Owner, Deposits or Bid Bonds will be returned to all except the three lowest Bidders within three days (Sundays and legal holidays excluded) after the formal opening of Bids, and to the three lowest Bidders within three days (Sundays and holidays excluded) after the Owner and accepted Bidder have executed the Contract. In the event that the Contract has not been executed by both the accepted Bidder and the Owner within 60 consecutive calendar days after the opening of the Bids, Bid security will be returned promptly upon demand of any Bidder who has not been notified of the acceptance of his Bid.

The successful Bidder will be required to be bonded to the Owner in a sum equal to one hundred (100) percent of the Bid Price by a separate Performance Bond.

In the event the successful Bidder fails to execute and deliver the agreement and to furnish the required contract security and insurance certificates within ten days of the Notice of Award (Sundays and Legal Holidays excluded) the Engineer may annul the Notice of Award and the Bid Security of that Bidder shall be forfeited as liquidated damages.

In the event the successful Bidder has failed to fulfill such promises (and subject to the Owner's right to reject all Bids), the Engineer shall issue the Notice of Award to the next lowest responsive, responsible Bidder. Any Bidder so awarded a Contract shall fulfill every stipulation embraced herein as if he were the original party to whom the award was made.

Check deposits accompanying Bids, which are rejected, will be returned within five days (Sundays and legal holidays excluded) after the rejection of the Bid.

None of the three lowest Bids shall be deemed rejected, notwithstanding acceptance of one of the Bids, until the contract has been executed by both the Owner and the accepted Bidder.

Attorneys-in-fact who sign Bid Bonds or payment Bonds and performance Bonds must file with each BOND a certified and effective dated copy of their power of attorney.

4.00 SUBMITTALS

Submit to the Engineer the following items a minimum of one week prior to the start of the Work:

1. Copies of all required permits;
2. Certificates of insurance in accordance with Section 19.00;
3. The proposed disposal/recycling facility for petroleum contaminated soil;
4. Minimum 50 lb. Sample of each proposed fill material, with description of source location and proposed use of each sample;
5. Results of laboratory soil tests for grain size distribution (in accordance with ASTM D-422) and Compaction Characteristics (in accordance with ASTM D-698) for each proposed fill material;
6. Excavation and Dewatering Plan describing means and methods of developing the required excavations, proposed dewatering methods including filtering devices or materials, treatment methods and proposed discharge/disposal location; and
7. Lateral Excavation Support Plan, prepared by a qualified Professional Engineer, licensed in the State of New Hampshire.

Submit to the Engineer the following within one week of completion of the Work:

1. Copies of Bills of Lading and Certificates of Destruction for all petroleum contaminated soil transported off-site and
2. Copies of weight slips for all off-site fill delivered to the site.

5.00 JOB CONDITIONS

Available reports, boring logs and chemical testing data are listed in Attachment A to these Specifications. Prior to submitting his bid, the Contractor must review and understand the available information, and develop appropriate means and methods for executing the work of these Specifications (the Work) accordingly. The information is made available to the contractor for information and factual data only, and shall not be interpreted as a warranty of subsurface conditions. The Contractor should base his means and methods for executing the Work not only on the available information, but also on his local experience and knowledge.

6.00 TRAFFIC CONTROL

Provide a police detail for traffic control where required by state or local authorities, or as directed by the Engineer. A police detail shall consist of one or more uniformed police officers, with or without a vehicle, as deemed necessary by state or local authorities. Establish requirements for traffic control with the applicable state and local authorities. Officers shall be clothed in a suitable and characteristic uniform that will readily distinguish them from all other employees. Officers shall be attired with regulation caps and blaze orange vests. Officers shall have police powers granted by the proper authorities and shall wear an exposed badge. Provide signs, traffic cones, barriers, and other devices where required to control traffic flow.

7.00 EXCAVATION

7.01 – General – Excavate soil within the approximate limits indicated on the Site Plan. Actual vertical and horizontal limits of excavation will be determined by the Engineer in the field based on indications of contamination, the presence of groundwater, and other factors. Cease excavation before undermining footings or utilities, or affecting the stability of structures. Maintain a minimum lateral distance of one foot away from footings or bottom of other structures for each foot of depth of excavation below the structure, or as otherwise necessary to protect existing utilities or structures. Excavate using methods that do not disturb nor damage pavement outside the final limits of the excavations. The estimated volume of excavation is indicated on the attached bid form. The estimated depth of excavation is _____ft.

7.02 – Protection of Existing Facilities –Protect landscaping structures, paving, monitoring wells and other features outside of the limits of the Work. Install barriers or grade the area surrounding the excavation to prevent the flow of surface water into the excavation. Provide fences, barricades or any other means necessary to protect the public from entering the work area or open excavations.

7.03 – Removal of Pavement – Excavate using methods that do not disturb or damage pavement outside the final limits of the excavations. Saw cut existing pavement using a pavement saw or wheel cutter prior to final backfilling and re-paving. At no additional cost, saw cut around any areas of pavement beyond the limits of the required excavations, that have been damaged by performance of the Work. Limits of pavement cutting and removal will be defined by the Engineer following completion of excavation. Remove, and properly dispose of pavement off-site.

7.04 – Lateral Support of Excavations – Design, furnish, install, maintain, and remove lateral excavation support systems for temporary support of the excavations. Provide adequate and continuous support of structures, streets, utilities, sidewalks and other facilities in the vicinity of the excavations to protect such facilities against damaging movements or effects, and to protect workers from injury. If movements or other effects of construction are noted, revise construction procedures and take measures to mitigate and abate further movement, at no additional cost. The arrangement, design, construction, testing and maintenance of all lateral support systems shall be the sole responsibility of the Contractor. Remove or abandon excavation support system components in-place as indicated in the Excavation and Dewatering Plan and Lateral Excavation Support Plan.

8.00 Dewatering

8.01 – General – During the progress of excavating, and prior to backfilling, remove accumulated groundwater from the excavation using a pump or other means, in accordance with the Excavation and Dewatering Plan. Control and remove groundwater in such a manner as to prevent loss-of-ground and excessive settlement outside the limits of excavations, and to allow the proper placement and compaction of fill. Install gravel filters around the pump intakes or provide other means to prevent the loss of fines from the soil.

8.02 – Testing and Disposal of Groundwater – Temporarily store groundwater in a frac tank. The Engineer will obtain samples of suspected petroleum contaminated groundwater in accordance with NHDES Env-Wm 1403. The samples will be submitted for analyses for VOCs (EPA Method 8260). Dispose of non-contaminated groundwater in a manner approved by the Engineer. File a Notice of Intent (NOI) with EPA Region I if discharge of water will be to surface waters of the State. Obtain all permits required for disposal prior to the start of the Work. Dispose of Petroleum contaminated groundwater at an approved disposal facility.

9.00 CONTAMINATED SOIL HANDLING

9.01 – Soil Segregation – Field screening of excavated soil will be performed by the Engineer. Soil will be assessed for indications of petroleum contamination based on odor, appearance, and the presence of VOCs using a PID. The Engineer will classify soils as contaminated or non-contaminated.

Segregate excavated soils into contaminated and non-contaminated stockpiles, based on the Engineer's classification. Construct stockpiles on a double layer of 8-mil polyethylene sheeting. Cover the stockpiles with a single layer of 8-mil polyethylene sheet at the end of each workday. Secure sheet to prevent disturbance by wind. Maintain the stockpile and replace the cover, if damaged.

9.02 – Soil Testing – The Engineer will obtain composite samples of suspected petroleum contaminated soil in accordance with NHDES Env-Ws 412. The Engineer will submit the samples for analyses for VOCs (EPA Method 8260B), TPH (EPA Method 8015), and ignitability (NHDES Method). The Engineer will provide the Contractor with copies of the laboratory report and a completed Virgin Petroleum Oil Certificate in accordance with Env-Ws 412. The Engineer will also obtain soil samples from the bottom and sidewalls of the excavations for confirmatory analysis for VOCs and TPH.

9.03 – Disposal of Contaminated Soils – Disposal of contaminated soil at an approved off-site facility. The Contractor shall contract with the disposal facility for loading, transportation, and disposal of the soil. Soil shall be transported in a watertight container in accordance with NHDOT requirements. All contaminated stockpiles shall be removed from the site and transported to an approved disposal facility within 2 weeks after receipt of analytical results. The Contractor shall be responsible for any additional disposal costs incurred due to excess weight caused by increase in soil moisture content after the soil is excavated. The Contractor shall protect excavated soil to prevent infiltration of water into, or erosion of soil from the stockpiles.

10.00 BACKFILLING

10.01 – General – Do not backfill excavations until results of analyses conducted on confirmatory soil samples obtained under Section 9.02 have been received, and the limits of excavation are approved by the Engineer. All off-site backfill materials must be approved by the Engineer prior to delivery to the site.

Placement, compaction and grading of all fill materials shall be conducted in accordance with NHDOT Specifications. Maximum particle size of any fill material shall not exceed three-fourths of the loose thickness of the lift being placed. Uncontaminated on-site soils meeting the gradation requirements of Section 10.02 shall be re-used as fill to the extent practicable. All fill materials shall consist of mineral soil, free of loam, trash, snow, ice, organics, construction debris or other detrimental materials.

10.02 – Materials

Common Fill – Common fill shall have a maximum of 30 percent by weight passing the No. 200 (.075 mm) sieve. Common fill shall be used as backfill up to a depth of 21 inches below the proposed finished grade.

Gravel – Gravel shall conform to NHDOT 304.2. A 12 inch compacted thickness of Gravel shall be placed immediately above the common fill placement.

Crushed Gravel – Crushed Gravel shall conform to NHDOT Item No. 304.4 (Modified Crushed Gravel). A minimum 6 inch compacted thickness of Crushed Gravel shall be placed immediately above the Gravel placement.

10.03 – Re-Use of Excavated Soils – Suitable non-contaminated soil shall be used as backfill. Suitable soil shall be: 1) in conformance with the material gradation requirements of Sections 10.01 and 10.02; 2) capable of being compacted to the minimum required density; and 3) capable of producing a dense, stable subgrade in the opinion of the Engineer. The Engineer will determine what soils are suitable for re-use. Unsuitable non-contaminated soil shall be disposed on-site at a location designated by the Engineer. Non-contaminated soil shall not be disposed off-site without written permission of the Engineer.

10.04 – Placement and Compaction – Materials shall be placed in lifts not exceeding 12 inches in loose thickness. Compact each lift with a minimum of four complete coverages of self-propelled vibratory compaction equipment to at least 95 percent of maximum dry density as determined in accordance with ASTM D-698 (Standard Proctor Test). Maintain or adjust moisture content as necessary to attain the minimum required degree of compaction. In areas where vibratory plate compactors are used, reduce the maximum loose lift thickness to 8 inches.

Compaction testing will be conducted by the Engineer.

10.05 – Replacement of Non-Conforming Materials – In-place backfill materials not meeting the requirements of these Specifications shall be removed, disposed of and replaced with conforming materials by the Contractor at no additional cost.

11.00 PAVING AND CURBS

11.01 – Paving – Place bituminous concrete pavement within saw cut pavement areas. Material and workmanship shall conform to NHDOT 401. Base course shall be 2-inch compacted thickness, NHDOT Type B. Wearing course shall be 1-inch compacted thickness, NHDOT Type E. Finish grade shall be flush with elevation of cut edges of existing pavement, and sloped to conform to flow paths in existing pavement. Restore existing pavement markings, conforming to NHDOT 708-NH 4.11.

11.02 – Curbs – Reinstall all curbs removed during execution of the Work in accordance with NHDOT 609. Replace all curbs broken due to performance of the Work.

12.00 LOAM AND SEED

Restore all grassed areas disturbed by the Work. Spread a minimum 4 inch thickness of loam in accordance with NHDOT 641. Prepare the seed bed in accordance with NHDOT 644. Apply starter type fertilizer at the rate recommended by the manufacturer. Apply Park Seed Type 15 seed in accordance with NHDOT 644. Apply hay mulch in accordance with NHDOT 645.

13.00 RESPONSIBILITIES OF OWNER

The owner will be responsible for watering of seeded areas. The Owner will provide other services as detailed in Attachment B to these Specifications. Coordinate all other needs with the Engineer prior to submitting the Bid.

14.00 PERMITS, RULES, ORDINANCES

Comply with all applicable laws, rules, regulations, codes, and ordinances, and obtain all applicable permits prior to the start of Work. Obtain Dig safe clearance prior to the start of work. Obtain local and NHDOT bonding, and street opening permits where required.

Comply with the requirements of State of New Hampshire Code of Administrative Rules Env-Ws 412, Reporting and Remediation of Oil Discharges.

Comply with Project Restrictions detailed in Attachment C to these Specifications.

All permits and licenses necessary for the prosecution of the work shall be obtained and paid for by the Contractor. Permits may include:

- a. New Hampshire Department of Transportation Highway trench permits.
- b. RSA 485-A:17 and 483-A N.H. Wetlands Board Permit (dredge and fill).
- c. RSA 485-A:17 – site specific permit (water quality)
- d. RSA 149-M:10 New Hampshire Bureau of Solid Waste – disposal of construction debris and/or demolition waste.
- e. Notice of Intent (NOI) for coverage under EPA's General NPDES Permit for Construction Dewatering Activities.
- f. Other permits, as required by Federal, State and Local laws and ordinances.

15.00 HEALTH AND SAFETY RESPONSIBILITIES

The Contractor shall at all times be responsible for exercising reasonable precaution for the health and safety of his employees and all other workers engaged in the execution and control of the Work required in these Specifications. The Contractor shall comply with all applicable provisions of federal, state and local health and safety statutes, codes and regulations, including 29 CFR Parts 1910 and 1926.

The Contractor shall prepare a project specific Health and Safety Plan, for use by all personnel engaged in the Work. The Contractor shall review the plan with all on-site employees and other personnel prior to starting the Work. Note that excavation and handling of petroleum contaminated soil and groundwater shall be required.

16.00 UNDERGROUND UTILITIES

Underground utilities may exist in the work areas. Review the locations of underground utilities with the Engineer before beginning excavation or other intrusive activities. Review any available drawings indicating utility locations. Contact Digsafe and obtain an Authorization to Excavate number prior to beginning any intrusive work at the site.

The Contractor is responsible for any damage to utilities marked by Digsafe, shown on drawings, or otherwise believed to be present based on the Contractor's field observations or discussions with the Owner and/or Engineer. Any such utilities damaged by performance of the work shall be repaired by the Contractor at no additional cost. Repair all damaged utilities to the satisfaction of the Engineer.

17.00 PROTECTION OF WORK

Protect the work from wind and water erosion. Provide temporary berms, swales, and other structures as required to redirect surface water away from excavated areas. The Contractor shall be responsible for, but not paid for, proper management, treatment, and disposal of any surface water that enters the excavation due to surface runoff.

Protect above and below grade utilities and structures, which are to remain. Provide suitable support for utilities that may be affected by the Work. Protect landscaping, structures, paving, monitoring wells and other features outside of the work area. Install barriers or grade the area surrounding the excavation to prevent the flow of surface water into the excavation.

Protect from damage all curbing and pavement outside of the limits of excavation. Replace all curbing or pavement that is damaged by performance of the Work. Curbing or pavement outside of the limits of the excavation that is damaged by performance of the Work shall be replaced at no additional cost.

18.00 SCHEDULE AND PROSECUTION OF WORK

The Work shall start no later than 14 calendar days after contract award, and shall be completed no later than _____ calendar days after commencement of construction. Coordinate all scheduling of the Work with the Engineer. Provide Engineer with minimum 72 hours notice prior to mobilization to the site.

Limit the days and hours of work to comply with local ordinances and the conditions of Attachment C to these Specifications.

The contractor shall pursue the Work regularly, diligently and continuously at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the Owner, that the time for the completion of the work described herein is a reasonable time.

19.00 INSURANCE

The contractor shall not commence work under this contract until he has obtained all the insurance required under this article and such insurance has been approved by the Engineer. The Owner and Engineer (as defined at the beginning of these Specifications) shall be named as additional insured parties on all General Liability policies.

The minimum limits of liability of such insurance shall be as follows:

A. General (Comprehensive) Liability and Owners Protective Liability:

Description	Amount
Bodily Injury or Death – Each Person	\$500,000
Bodily Injury or Death – Each Accident	\$1,000,000
Property Damage – Each Accident	\$500,000
Property Damage – Aggregate	\$1,000,000

B. Automobile and Truck Liability:

Description	Amount
Bodily Injury or Death – Each Person	\$500,000
Bodily Injury or Death – Each Accident	\$1,000,000
Property Damage – Each Accident	\$200,000
Property Damage – Aggregate	\$200,000

20.00 ENGINEERS ESTIMATE AND ADDITIONAL WORK

The Engineer's estimated quantities are indicated on the Bid Form. Actual quantities may vary from those indicated. The total Bid Price for each item shall be based on the quantities indicated on the Bid Form. No adjustment in unit price for an individual pay item will be considered unless the actual quantity of the pay item required to complete the Work varies by Greater than twenty-five percent (25%) from that indicated on the Bid Form.

21.00 EXTRA WORK AND CHANGE ORDERS

21.01 – The Engineer may at any time by written order and without notice to the Sureties require the performance of such extra work or changes in the work as may be found necessary or desirable. The amount of compensation to be paid to the Contractor for any extra work so ordered shall be made in accordance with whichever of the following plans the Engineer elects: (1) a price agreed upon between the parties and stipulated in the order for the extra work, (2) a price based on the unit prices of the contract, (3) a price determined by adding 15% to the "reasonable cost" of the extra work performed, such "reasonable cost" to be determined by the Engineer in accordance with the following paragraph.

21.02 – In arriving at the "reasonable cost" for the purposes of (3) above, the Engineer shall include the reasonable cost to the Contractor of all materials used, of all labor, both common and skilled, of foreman, trucks, and the fair-market rental rate for all machinery and equipment for the period employed directly of the work. The reasonable cost for extra work shall include the cost to the Contractor of any additional insurance that may be required covering public liability for injury to persons and property, the cost of Workmen's Compensation Insurance, Federal Social Security, and any other costs based on payrolls, and required by law. The cost of extra work shall not include any cost or rental of small tools, buildings, or any portion of the time of the contractor, his project supervisor or his superintendent, as assessed upon the amount of extra work, these items being considered covered by the fifteen percent (15%) added to the reasonable cost. Furthermore, no allowance for use of capital or premium on the bond will be considered unless the extra work includes an extension of time approved and authorized by the Owner.

21.03 – In the case of extra work which is done by subcontractors, whether these are under the specific contract items provided herein, or otherwise if so approved by the Engineer, the 15% added to the reasonable cost of the work will be allowed only to the subcontractor. On such work an additional percentage of the reasonable cost (before addition of the 15%) will be paid to the Contractor for his work in directing the operations of the subcontractor, for administrative supervision, and for any overhead involved. Such percentage shall be in accordance with the following schedule:
Reasonable cost up to and including \$50,000 – 10%; \$50,000 to and including \$100,000 – 7 ½%; greater than \$100,000– 5%

21.04 – The Engineer may authorize minor changes or alterations in the work not involving extra cost and not inconsistent with the overall intent of the Contract Documents. These may be accomplished by a written Field Order. However, if the Contractor believes that any minor change or alteration authorized by the Engineer entitles him to an increase in the contract price, he may make a claim therefore as provided in Section 23.00

22.00 CLAIMS FOR DIFFERING SITE CONDITIONS

22.01 – The Contractor shall promptly and before such conditions are disturbed, notify the Engineer in writing of:

- A. Subsurface or latent physical conditions at the site differing materially from those indicated in this contract; or,
- B. Unknown physical conditions at the site differing materially from those ordinarily encountered and generally recognized as inherent in the type of work provided for in this contract.

22.02 – The Engineer shall promptly investigate the conditions. If he finds that conditions differ materially and will cause an increase or decrease in the Contractor's cost or the time required to perform any part of the work under this contract, the Engineer shall make an equitable adjustment and modify the contract in writing.

22.03 – No claim of the Contractor under this clause shall be allowed unless the Contractor has given proper notice as required in paragraph 22.01 of this Section.

22.04 – No claim by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.

23.00 CLAIMS FOR EXTRA COST

23.01 – No claim for extra work or cost shall be allowed unless the same was done pursuant to a written order by the Engineer, approved by the Owner and the claim presented for payment with the first estimate after the changed or extra work is done. When work is performed under the terms of Section 21.00, the contractor shall furnish satisfactory bills, payrolls and vouchers covering all items of cost and when requested by the Owner, shall allow the Owner access to accounts relating thereto.

23.02 – If the Contractor claims that any instructions by drawings or similar documents issued after the date of the contract involve extra cost under the contract, he shall give the Engineer written notice after the receipt of such instruction and before proceeding to execute the work, except in an emergency which threatens life or property, then the procedure shall be as provided for under Section 21.00. No such claim shall be valid unless so made.

24.00 MEASUREMENT AND PAYMENT

Pay items shall be paid using the units and unit prices indicated on the Bid Form. Payment shall be full compensation for all labor, materials, equipment, tools, and transportation required to complete the Work under each pay item. Payment shall be made in accordance with the general terms and conditions of the Contract. The Owner will seek reimbursement from the New Hampshire Petroleum Reimbursement Fund for the Work. As such, all pay requisitions shall be in conformance with the New Hampshire Code of Administrative Rules Chapters Odb 200 and 400.

Item 1 – Mobilization/Demobilization includes preparation of the site, obtaining permits, establishment of temporary storage, movement of personnel and equipment to and from the site, and preparation and implementation of the contractor's site specific Health and Safety Plan, Excavation and Dewatering Plan and Lateral Excavation Support Plan. No measurement will be made. Payment will be lump sum.

Item 2 – Soil Excavation and Backfilling includes soil excavation, segregation, stockpiling and maintenance of the stockpile, backfilling and compaction. Measurement shall be by the cubic yard of soil excavation on the site. The volume excavated shall be computed to the nearest cubic yard, based on linear measurement of the excavation dimensions determined by the Engineer.

Item 3 – Off-site Borrow includes the cost of providing off-site fill to replace petroleum-contaminated soil disposed off-site, or non-contaminated unsuitable excavated soil. Measurement shall be by the ton, based on the tonnage indicated on certified weight slips.

Item 4 – Asphalt Paving includes the cost of furnishing, placing, and compacting asphalt plant mix. Measurement shall be based on the area calculated by measurement of linear dimensions, to the nearest square yard. No payment will be made for paving damaged areas outside the required limits of excavation.

Item 5 – Excavation Dewatering includes the cost of providing, operating and maintaining equipment required to dewater the excavation. No measurement will be made. Payment will be lump sum.

Item 6 – Off-site Contaminated Groundwater Disposal includes the cost of off-site disposal of petroleum-contaminated groundwater. Measurement shall be by the gallon based upon flow totalizer readings using a flow meter approved by the Engineer.

Item 7 – On-site Non-Contaminated Groundwater Disposal includes the cost of onsite disposal of non-contaminated groundwater. Measurement shall be by the gallon, to the nearest gallon.

Item 8 – Frac Tank includes the cost of providing a frac tank for temporary on-site storage of groundwater. Measurement shall be the number of days the tank is on-site and in use. Each partial day equal to or greater than 12 hours shall be considered one full day.

Item 9a,b – Off-site Contaminated Soil Treatment and Disposal includes the cost of loading and transportation (Item 9a), and treatment/disposal (Item 9b) of contaminated soil. Measurement shall be the tonnage indicated on certified weigh slips.

Item 10 – Restore Pavement Markings includes the cost of replacing pavement markings in areas disturbed by the work. No measurement will be made. Payment will be lump sum.

Item 11a,b – Traffic Control includes the cost of providing one or more police officers (as determined with state and/or local authorities) and police vehicles, if required (Item 11a), and traffic signs, barriers, and other traffic control devices (Item 11b). The types of traffic control devices, personnel and requirements for police vehicle(s) shall be established prior to the bid. Measurement shall be by the hour for the number of hours traffic control is needed on-site, rounded to the nearest full hour.

Item 12 – Remove and Reset Curbs includes the cost of removing, storing, and resetting existing curbing in areas disturbed by the work, and includes placement and compaction of the granular base, and mortaring of joints. Measurement shall be to the nearest linear foot of curbing re-installed. No payment shall be made for replacement of curbing that is damaged during execution of the work.

Item 13 – Loam and Seed includes the cost of supplying, placing, and grading of loam borrow; raking, fertilizing, seeding, rolling, mulching and other work required to restore disturbed grassed areas. Measurement shall be to the nearest square yard, based on linear measurement of the area by the Engineer. No payment will be made for repairing damaged areas outside the required limits of excavations.

ATTACHMENT A – AVAILABLE INFORMATION

Prior to submitting his bid, the Contractor must review and understand the available information, and develop appropriate means and methods for executing the Work of these Specifications accordingly. The information is made available to the Contractor for information and factual data only, and shall not be interpreted as a warranty of subsurface conditions.

The Available Information listed below is available for review at the following address and times:

AVAILABLE INFORMATION:

GUIDANCE DOCUMENT

ATTACHMENT B – SUPPLEMENTAL RESPONSIBILITIES OF OWNER

The following services are to be made available at the project site by the Owner at no cost to the contractor:

SERVICE

DETAILS

Electric Service

Potable Water

Sanitary Facilities

Secure Storage
Area

Unsuitable Non-
Contaminated
Soil Disposal
Area

Other

ATTACHMENT C – PROJECT RESTRICTIONS

Work Days
Available:

Hours of Work:

On-Site Traffic Control:

Maintenance of Access:

Required Work
Completion Date:

GUIDANCE

Other

CONVIENI

BID

Proposal of _____ (hereinafter called "Bidder"), organized and existing under the laws of the State of _____, doing business as _____.

(Corporation, Partnership, Individual)

To _____ (hereinafter called "Owner").

In compliance with your Advertisement for Bids, Bidder hereby proposes to perform all Work for the SOIL EXCAVATION AND DISPOSAL at _____ in _____, New Hampshire in strict accordance with the Contract Documents, within the time set forth therein, and at the prices stated below.

By submission of this Bid, each Bidder certifies, and in the case of a joint Bid each party thereto certifies as to his own organization, that this Bid has been arrived at independently, without consultation, communication, or agreement as to any matter relating to the Bid with any other Bidder or with any competitor.

Bidder acknowledge receipt of the following Addendum:

The Bidder declares as follows:

1. The only parties interested in the Bid as Principals are named herein;
2. This bid is made without collusion with any person, firm, or corporation;
3. No officer, agent, or employee of the Owner or Engineer is directly or indirectly interested in this Bid;
4. He understands the difficulties attendant upon execution of the Work, and the accuracy of all estimated quantities stated in this Bid, and he has carefully examined the proposed Agreement, the Plans and Specifications and other Contract Documents therein referred to and knows and understands the terms and provisions thereof;

BID (CONTINUED)

5. He understands that the quantities of Work tabulated in this Bid or indicated in the Specifications are only approximate and are subject to increase or decrease as deemed necessary by the Engineer.

The undersigned further understands and agrees that he is to furnish and provide for the respective item price Bid all the necessary material, machinery, implements, tools, labor, services, and other items of whatever nature, and to do and perform all the work necessary under the aforesaid conditions, to complete the above-mentioned Work in accordance with the Contract Documents.

Instructions for Completion of the Bid

1. The Bidder must bid on each item.
2. The Bid shall include all applicable taxes and fees.
3. The Bid must be completed in ink or typewritten.
4. The Bidder must multiply the unit price by the estimated quantity to obtain the Item Total.
5. In the event that the item total does not equal the unit price multiplied by the estimated quantity, the unit price bid shall be used to correct the item total. The corrected item total shall then be used to determine the Total Bid Price.

DOCUMENT

BID (CONTINUED)**BID SCHEDULE**

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>ESTIMATED QUANTITY</u>	<u>UNIT PRICE</u>	<u>ITEM TOTAL</u>
1.	Mobilization/Demobilization	Lump Sum	1	\$ _____	
2.	Soil Excavation & Back Filling	Cubic Yard		\$ _____	
3.	Offsite Borrow	Ton		\$ _____	
4.	Asphalt Paving	Square Yard		\$ _____	
5.	Excavation Dewatering	Lump Sum	1	\$ _____	
6.	Off-Site Contaminated Groundwater Disposal	Gallon		\$ _____	
7.	On-Site Non-Contaminated Groundwater Disposal	Gallon		\$ _____	
8.	Frac Tank	Day		\$ _____	
9a.	Loading and Offsite Transportation of Contaminated Soil	Ton		\$ _____	
9b.	Offsite Treatment and Disposal of Contaminated Soil	Ton		\$ _____	
10.	Restore Pavement Markings	Lump Sum	1	\$ _____	
11a.	Traffic Control – Police Detail	Hour		\$ _____	
11b.	Traffic Control – Signs, Barriers, Devices	Hour		\$ _____	
12.	Remove and Reset Curbs	LF		\$ _____	
13.	Loam and Seed	Square Yard		\$ _____	
	TOTAL BID PRICE \$ _____ (In numerals) _____ Dollars (In words)				
	<p>Bid forms shall be completed in ink or by typewriter. In the case of a conflict between the unit price and the total amount for the item, the unit price will take precedence. In case of conflict between the Total Bid Price in numerals and written words, the written words take precedence.</p>				

BID (CONTINUED)

The Bidder hereby agrees that he will not withdraw his Bid within 60 consecutive calendar days after the actual date of the Opening of Bids and that, if the Owner accepts this Bid, the Bidder will duly execute and acknowledge the Contract, and furnish, duly executed and acknowledged, the required Performance Bond within ten (10) days after notification that the Contract Documents are ready for signature.

Should the Bidder fail to fulfill any of his agreements as hereinabove set forth, the Owner shall have the right to retain as liquidated damages the amount of the bid security which shall become the Owner's property.

The Bidder, by submittal of this Bid, agrees with the Owner that the amount of the Bid security deposited with this Bid fairly and reasonably represents the amount of damages the Owner will suffer due to failure of the Bidder to fulfill his agreements as above provided.

Respectfully Submitted:

Signature

Address

Title

Date

Being duly sworn, deposes and says that he is

of

(Name of Organization)

and that the answers to the foregoing questions and all statement contained therein are true and correct.

Sworn to before me this _____ day of _____, 20_____.

Notary Public

My commission expires _____.
(Seal – If Bid is by Corporation)

ATTEST _____